

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended). A method of discovery and display of one or more phones on a computer network, said method including the steps of

discovering a phone by means of a first protocol,
using discovered information to insert an icon representing the phone in the relevant position in a display of the topology of the network,
and discovering other devices on the network using a different protocol.

Claim 2 (Currently Amended). A method as claimed in claim 1 in which the phone is discovered using ~~HTML~~ HTTP, and the other devices are discovered using SNMP.

Claim 3 (Original). A method as claimed in claim 1 in which the display comprises a map of the network.

Claim 4 (Previously Presented). A method as claimed in claim 3 in which the icon is connected to the other parts of the network by a line that is representative of a transmission line connecting the telephone to the network.

Claim 5 (Previously Presented). A method as claimed in claim 1 in which the display includes, adjacent the phone icon, information relating to the phone.

Claim 6 (Previously Presented). A computer program on a computer readable medium or embodied in a carrier wave for use in discovery and display of one or more phones on a network, said computer program comprising:

a program step for establishing the topology of the network including one or more phones, the program step comprising a program step for establishing the topology of the network using a first protocol, and a program step for establishing the topology of the one or more phones using a different protocol, and

a program step for using this information to insert an icon representing a relevant phone into a display of the topology of the network.

Claim 7 (Currently Amended). A computer program as claimed in claim 6 in which the first protocol is SNMP and the second protocol is ~~HTML~~ HTTP.

Claim 8 (Original). A computer program as claimed in claim 6 including a program step for providing the topology in a form which may be displayed on a visual display unit as a map of the network.

Claim 9 (Previously Presented). A computer program as claimed in claim 6 further including a program step where the icon is connected to other parts of the network by a line that is representative of the transmission line connecting the telephone to the network.

Claim 10 (Previously Presented). A computer program as claimed in claim 6 further including a program step for establishing information relating to the phone, and a program step for providing the information in a form for display on the visual display unit.

Claim 11 (Withdrawn). A computer program on a computer readable medium or embodied in a carrier wave for use in discovery of one or more phones on a network, said computer program

comprising:

a program step for using SNMP to discover entities of the network, including managed devices, a telephone controller and MAC addresses of unmanaged phones;

a program step for changing from SNMP to HTML;

a program step for loading a web page from the telephone controller;

a program step for parsing information from the web page to establish correspondence between a particular phone and a MAC address;

a program step for finding a port associated with the MAC address of the particular phone;

a program step for retrieving relevant details of the particular phone, wherein retrieving the relevant details is conditioned upon determining that only the MAC address of the particular phone is associated with the port;

a program step for displaying on the network map a phone icon connected to the network via a port icon that is representative of the port, wherein displaying the phone icon connected to a port icon is conditioned upon determining that only the MAC address of the particular phone is associated with the port;

a program step for displaying on the network map a device icon connected to the network via the phone and port icons, wherein displaying the device icon is conditioned upon determining that (i) two MAC addresses are associated with the port, and (ii) one of the two MAC addresses is associated with the phone; and

a program step to display on the network an unmanaged aggregator cloud icon connected to the network via the port icon, wherein displaying the unmanaged aggregator cloud icon is conditioned upon determining that (i) at least two MAC addresses are associated with the port, and (ii) the at least two MAC addresses are not associated with the phone.

Claim 12 (Previously Presented). Apparatus for use in the discovery of one or more phones on a network, comprising:

means to discover on the network a phone and another device using respective first and second protocols; and

means to use the information discovered to insert an icon representing a phone in the relevant position in a display of the topology of the network.

Claim 13 (Currently Amended). Apparatus as claimed in claim 12 in which the first and second protocols respectively comprise ~~HTML~~ HTTP and SNMP.

Claim 14 (Original). Apparatus as claimed in claim 12 in which the display comprises a map of the network.

Claim 15 (Previously Presented). Apparatus as claimed in claim 14 in which the icon is connected to the other parts of the network by a line that is representative of a transmission line connecting the telephone to the network.

Claim 16 (Previously Presented). Apparatus as claimed in claim 12 in which the display includes, adjacent the phone icon, information relating to the phone.

Claim 17 (Previously Presented). A method as claimed in claim 1 in which discovering a phone by means of a first protocol comprises:

obtaining from the network an address of the phone using a first given protocol; and

responsive to obtaining the address, obtaining from the network the identity of the phone using a second given protocol.

Claim 18 (Previously Presented). A method as claimed in claim 17 further comprising obtaining from the network details associated with the phone using the second given protocol.

Claim 19 (Canceled).

Claim 20 (Previously Presented). A method as claimed in claim 17 in which obtaining from the network the identity of the phone using a second given protocol comprises:

- loading a web page from a telephone controller; and
- parsing information from the web page to establish correspondence between a particular phone and a MAC address.

Claim 21 (New). A method of discovery and display of one or more phones on a network, said method including the steps of:

- discovering a phone MAC address on a port of the network;
- discovering if there are further MAC addresses on said port;
- if there is only a single MAC address on said port, displaying a phone icon directly connected to said port on a network map;
- if there are two MAC addresses on said port, displaying a phone icon directly connected to said port on a network map and an icon of a device with a second MAC address connected to the network via the phone; and
- if there are more than two MAC addresses, displaying an unmanaged aggregator display

cloud.

Claim 22 (New). A computer program on a computer readable medium or embodied in a carrier wave for use in discovery and display of one or more phones on a network, said computer program comprising:

- a program step for establishing the topology of the network including said one or more phones;

- a program step for using this information to insert an icon representing a relevant phone into a display of the topology of the network;

- a program step to determine, in respect of a port on which a phone MAC address present, if there is only a single MAC address;

- if yes, a program step to retrieve and display a phone icon on a network map and relevant details connected directly to the port;

- if no, a program step to determine if there are two MAC addresses and if one is a phone;

- if yes, a program step to provide an icon of a device with a second MAC address connected to the network via the phone; and

- if no, a program step to display an unmanaged aggregator display cloud.

Claim 23 (New). A method as claimed in claim 1 in which said network includes a phone and a device connected to one port of a switch in series, said method including the steps of:

- discovering the phone;

- discovering the other device and discovering that it is attached to the same port as the phone; and

- using discovered information to insert an icon representing the phone and the device in

series in the relevant position in a display of the topology of the network.

Claim 24 (New). A method as claimed in claim 19 in which the phone is discovered using HTML, and the other devices are discovered using SNMP.

Claim 25 (New). A computer program as claimed in claim 6 in which said network includes a phone and a device connected to one port of a switch in series, said computer program further comprising:

- a program step to discover the phone;

- a program step to discover the other device and discover that it is attached to the same port as the phone; and

- a program step to use discovered information to insert an icon representing the phone and the device in series in the relevant position in a display of the topology of the network.